AMENDMENTS TO THE CLAIMS

This listing of claims will replace all prior versions, and listings, or claims in the application.

Listing of the Claims:

1. (Cancelled).

2. (Currently amended) A biocompatible substrate for the cosmetic reconstruction of a mammalian soft tissue feature or region comprising:

a) a scaffold comprising a polymer, biopolymer or combination thereof in a thin sheet, microparticle or semi-solid block form;

b) embedding or incorporating into the scaffold; during its synthesis ~~an~~ attachment or growth promoting reagents ~~comprising~~ consisting essentially of one or more of the following: laminin, fibronectin, RGDS, bFGF conjugated with polycarbophyll, EGF conjugated with polycarbophyll, and heparin sulfate; and

c) wherein the scaffold is molded into the shape of ~~the recipients~~ a mammalian skin epithelial feature or region.

3. (Currently amended) The biocompatible substrate of claim ~~1~~ 2, wherein the soft tissue features to be reconstructed can be any soft tissue feature such as a human ear, areola, nose, lip, genitalia, fingertip, and nail bed.

4. (Currently amended) The ~~composition~~ biocompatible substrate of claim ~~1~~ 2, wherein the scaffold is selected from the group comprising:

a) natural polymers including but not limited to collagen, gelatin, hyaluronate, fibrin and alginate;

b) synthetic polymers including but not limited to polyacrylic acid and derivatives, polyethylene oxide and copolymers, polyvinyl alcohol, polyphosphazene, polypeptides; PNIPAAM/gelatin; NIPAAM; and

c) further compositions comprising mixtures of natural polymers in a) and synthetic polymers in b).

5. (Withdrawn) A method for the cosmetic reconstruction of a mammalian soft tissue region comprising the steps of:

a) making a three-dimensional mold of the soft tissue region of a patient;

b) creating a biocompatible substrate comprising a scaffold which has embedded or incorporated into the scaffold during its synthesis an attachment and/or growth reagent;

c) transferring into the three-dimensional mold of the soft tissue region of said patient to shape the biocompatible substrate into the soft tissue region that is an anatomic replica of the patient's the soft tissue region to be reconstructed;

d) implanting the biocompatible substrate of step c during subsequent reconstructive surgery into the appropriate tissue of the patient, anchored with removable sutures;

e) allowing the growth of epithelial cells over its surface to provide a skin covering, integrating seamlessly with the scaffold provided by the biocompatible substrate; and

f) allowing the growth of nerves and nerve fibers into the biocompatible substrate, to provide the soft tissue region with sensation.

6. (Withdrawn) A method for the cosmetic reconstruction of a mammalian soft tissue region comprising the steps of:

a) making a three-dimensional mold of the soft tissue region of a patient;

b) creating a biocompatible substrate comprising a scaffold which has embedded or incorporated into the scaffold during its synthesis an attachment reagent comprising one or more of the following: laminin, fibronectin, RGDS, bFGF conjugated with polycarbophyll, EGF conjugated with polycarbophyll, and heparin sulfate;

c) transferring into the three-dimensional mold of the soft tissue region of said patient to shape the biocompatible substrate into the soft tissue region that is an anatomic replica of the patient's soft tissue region to be reconstructed;

d) implanting the biocompatible substrate of step c during subsequent reconstructive surgery into the appropriate tissue of the patient, anchored with removable sutures;

e) allowing the growth of epithelial cells over its surface to provide a skin covering, integrating seamlessly with the scaffold provided by the biocompatible substrate; and

f) allowing the growth of nerves and nerve fibers into the biocompatible substrate, to provide the soft tissue region with sensation.

7. (Withdrawn) The method for the cosmetic reconstruction of a mammalian soft tissue region of claim 5, wherein the soft tissue features to be reconstructed can be any soft tissue feature such as a human ear, areola, nose, lip, genitalia, fingertip, and nail bed.

8. (Withdrawn) The method of claim 5 wherein the biocompatible substrate is comprised of a biopolymer selected from the group comprising:

a) natural polymers including but not limited to collagen, gelatin, hyaluronate, fibrin and alginate;

b) synthetic polymers including but not limited to polyacrylic acid and derivatives, polyethylene oxide and copolymers, polyvinyl alcohol, polyphosphazene, polypeptides; PNIPAAM/gelatin; NIPAAM; and

c) further compositions comprising mixtures of natural polymers in a) and synthetic polymers in b).

9. (Withdrawn) A method for the cosmetic reconstruction of a mammalian ear region comprising the steps of:

a) making a three-dimensional mold of the ear region of a patient;

b) creating a biocompatible substrate comprising a biopolymer which has embedded or incorporated into the biopolymer during its synthesis an attachment reagent comprising one or more of the following: laminin, fibronectin, RGDS, bFGF conjugated with polycarbophyll, EGF conjugated with polycarbophyll, and heparin sulfate;

c) transferring into the three-dimensional mold of the ear of said patient to shape the biocompatible substrate into an ear that is an anatomic replica of the patient's ear;

d) implanting the biocompatible substrate of step c during subsequent reconstructive surgery into the scalp tissue of the patient, anchored with removable sutures;

e) allowing the growth of epithelial cells over its surface to provide a skin covering, integrating seamlessly with the scaffold provided by the biocompatible substrate; and

f) allowing the growth of nerves and nerve fibers into the biocompatible substrate, to provide the ear with sensation.

10. (Withdrawn) The method of claim 7 wherein the biocompatible substrate is comprised of a biopolymer selected from the group comprising:

a) natural polymers including but not limited to collagen, gelatin, hyaluronate, fibrin and alginate;

b) synthetic polymers including but not limited to polyacrylic acid and derivatives, polyethylene oxide and copolymers, polyvinyl alcohol, polyphosphazene, polypeptides; PNIPAAM/gelatin; NIPAAM; and

c) further compositions comprising mixtures of natural polymers in a) and synthetic polymers in b).

11. (Withdrawn) A method for the cosmetic reconstruction of a mammalian areola and nipple region comprising the steps of:

a) making a three-dimensional mold of the areola and nipple region of a patient;

b) creating a biocompatible substrate comprising a scaffold which has embedded or incorporated into the scaffold during its synthesis an attachment or growth reagent comprising one or more of the following: laminin, fibronectin, RGDS, bFGF conjugated with polycarbophyll, EGF conjugated with polycarbophyll, and heparin sulfate;

c) transferring into the three-dimensional mold of the ear of said patient to shape the biocompatible substrate into an ear that is an anatomic replica of the patient's areola and nipple region;

d) implanting the biocompatible substrate of step c during subsequent reconstructive surgery into the breast tissue of the patient, anchored with removable sutures;

e) allowing the growth of epithelial cells over its surface to provide a skin covering, integrating seamlessly with the scaffold provided by the biocompatible substrate; and

f) allowing the growth of nerves and nerve fibers into the biocompatible substrate, to provide the areola and nipple with sensation.

12. (Withdrawn) The method of claim 11 wherein the biocompatible substrate is comprised of a scaffold selected from the group comprising:

a) natural polymers including but not limited to collagen, gelatin, hyaluronate, fibrin and alginate;

b) synthetic polymers including but not limited to polyacrylic acid and derivatives, polyethylene oxide and copolymers, polyvinyl alcohol, polyphosphazene, polypeptides; PNIPAAM/gelatin; NIPAAM; and

c) further compositions comprising mixtures of natural polymers in a) and synthetic polymers in b).